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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/096,515	06/12/1998	YUJI INOUE	35.G2190	1905

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EXAMINER	
A, PHI DIEU TRAN	

ART UNIT	PAPER NUMBER
3637	

DATE MAILED: 12/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/096,515	INOUE ET AL.
	Examiner	Art Unit
	Phi D A	3637

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 October 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *4,6-12 and 122* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *4,6-12 and 122* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/7/04 has been entered.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the limitations to " under roofing material" must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified

and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 4, 6-12, 122 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

There is no support for the under roofing material being " asphalt resins, vinyl chloride resins, polystyrene resin, and polyurethane resins". The disclosure of pages 11-14 fails to disclose the claimed chemical limitations.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 4, 6-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Itoyama et al (5589006) in view of Frihart et al (5786086), and Jordan (5572843).

Itoyama et al shows a cladding assembly/air flow apparatus comprising a plurality of building materials each of which comprises a substrate (107), a solar cell (101) unit fixed to the substrate, each of the plurality of building materials fixed on a backing material (104) by a fixing member (figure 1b), electrical conductive leads (113) arranged between the building materials and the backing material (figure 1b) for leading output from the solar cell units to the outside, a jacket material on each of the conductive leads, the substrate being composed of metal, the leads having connector provided at the end of each of the leads, a spacer (102) provided between the building materials and the backing material, the plurality of building materials are arranged on the backing material so that the adjacent building materials are electrically connected by the electrical conductive leads (figure 1b), the backing material being a heat insulating board (inherently so as it functions as a heat barrier), a space between the substrate and the backing material so that outside air flows in the space, passes through the space and is entrapped in a house or discharged to the outdoors (figure 8).

Itoyama et al does not show an under roofing material arranged on a backing material, the electrical conductive leads contacting the backing material, the jacket material being composed of at least one selected from the group consisting of polyethylene resins, polyamide resins, vinylidene fluoride resins, chloroprene rubber, ethylene-propylene rubber, silicone resins, and flouroresins, the under roofing material is a sheet material containing any one of asphalt resins, vinyl chloride resins, polystyrene resins, and polyurethane resins, the connector composed of at least one selected from the group consisting of polyethylene resins, polyamide resins, vinylidene fluoride reins, chloroprene rubber, ethylene-propylene rubber, silicone resins, and flouroresins.

Frihart et al teaches a conductive wire coating of a polyamide resin composition for insulation and protection of the wire providing highly desirable properties (see abstract).

Applicant's disclosure of the prior art teaches that it is well known for one skill in the art to lengthen the electrical connector causing it to be in contact with the backing material to make connecting the panels easier (page 3 lines 18-25).

Jordan discloses an under roofing material(16) made of polyvinyl chloride (inherently having resin) on a roof backing material (18) to enhance the water proof ability of the roof.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Itoyama et al to show the jacket material and the connector being composed of at least one selected from the group consisting of polyethylene resins, polyamide resins, vinylidene fluoride resins, chloroprene rubber, ethylene-propylene rubber, silicone resins, and flouroresins because to have the jacket and connector material composed of polyamide resins as taught by Frihart et al would have been a matter of obvious design choice as it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use, In re Leshin , 125 USPQ 416.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Itoyama et al to show the electrical conductive leads contacting the backing material because it has been disclosed by applicant that it is well known for one skill in the art to lengthen the electrical connector causing it to be in contact with the backing material to make connecting the panels easier (page 3 lines 18-25)

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Itoyama et al to show the under roofing material containing polyvinyl

chloride resins as taught by Jordan because having a layer of water proof material on the backing material would enhance the water proofing property of the roof as taught by Jordan.

Itoyama et al as modified shows all the claimed limitations including the limitation of "electrical conductive leads arranged between the building materials and the under roofing material to contact the under roofing material".

Per claims 9-11, Itoyama et al as modified shows all the claimed limitations. The claimed method steps of installing a building material would have been the obvious method steps of installing Itoyama et al's modified structures.

3. Claim 122 is rejected under 35 U.S.C. 103(a) as being unpatentable over Itoyama et al (5589006) in view of Frihart et al (5786086), and Jordan (5572843) as applied to claim 4 above and further in view of Chamberlain (4615155).

Itoyama et al as modified shows all the claimed limitations except for the backing material including polystyrene foams or polyurethane foams.

Chamberlain discloses a roof backing panel including backing material of polystyrene foams or polyurethane foams.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Itoyama et al's modified structure to show the backing material including polystyrene foams or polyurethane foams because it would allow for the easy and low cost construction of a building structure as taught by Chamberlain (col 1 lines 51-52).

Response to Arguments

4. Applicant's arguments with respect to claims 4, 6-12, 122 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art shows different roof panels.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phi D A whose telephone number is 703-306-9136. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lanna Mai can be reached on 703-308-2486. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Phi Dieu Tran A

12/7/04